

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coor. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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		OTHER : ☐																																																																					

Work Order ID 154806

Thursday, December 22, 2016 7:16:44 AM

154806

Page 2

Item ID: D2873-043

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Nut Plate Assembly

Start Date: 1/3/2017 Start Qty: 20.00

20

Cust Item ID:

Required Date: 1/10/2017 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.07

Quality Control

20

φ

DAS
45 17-01-04
9-89

140

Small Fab

0.00

140

Small Fab

Memo

0.10

Small Fab

1-Deburr 2- C'sink as per Dwg D2873

20x

DAS
36
17-01-05 9-89

150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.07

Quality Control

20 17-01-05

DAS
9
9-89

DQA: _____ Date: _____



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QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
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Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

154806

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N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Start Date: 1/3/2017 **Start Qty:** 20.00

20

Customer:

Required Date: 1/10/2017 **Req'd Qty:** 20.00

20

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Chemical Conversion Coat per QSI005 4.1

0.00

160

Memo

0.07

HandFinish

Hand Finishing

BEB

170

QC7-Inspect Chemical Conversion Coat

0.00

170

Memo

0.03

QC

Quality Control

IAN 09 2017

180

Small Fab

0.00

180

Memo

0.10

Small Fab

Small Fab

1-Assemble as per Dwg D2873 2-Identify as D2873-043

DQA: _____ Date: _____



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Work Order ID 154806***154806***

Page 4

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Item ID: D2873-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Nut Plate Assembly
Start Date: 1/3/2017 Start Qty: 20.00 ***20*** Cust Item ID:
Required Date: 1/10/2017 Req'd Qty: 20.00 ***20*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC5- Inspect part completeness to step on W/O	0.00							
190						<u>20</u>			DAS 38 9-89
QC	Memo	0.07							
Quality Control									JAN 10 2017
200	Identify as per dwg & Stock Location: _____	0.00							
200						<u>20</u>			DAS 6 99
Packaging	Memo	0.03							JAN 11 2017
Packaging	LOCATION : LG050								
210	QC21- Final Inspection - Work Order Release	0.00							
210						DAS 21 9-89			JAN 12 2017
QC	Memo	0.33							
Quality Control									

VS 17/1/14

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition			
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				Lead hand / Supervisor Approval Verification			
				QC / QA Coordinator Approval			

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐		Temperature/Cure ☐	☐	Power Loss/Surge ☐	☐
Design ☐	☐	Operator ☐		Set-up ☐	☐	Folio/Program ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐		BOM/Route ☐	☐	Grain ☐	☐
Equip/Tooling ☐	☐	Supplier ☐		Broken/Damage/Defect ☐	☐	Weld ☐	☐
Handling/Pre ☐	☐	Training ☐		Inspection Incomplete/Unqualified ☐	☐	Wrong Stock Pulled ☐	☐
Material ☐	☐	Use for Testing ☐		Contamination ☐	☐	Out of Sequence ☐	☐
Internal Transport ☐	☐	Poor Information ☐		Countersink ☐	☐	Off-set ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐		Cut Too Short ☐	☐	Mislabeled ☐	☐
LOA ☐	☐	Product Improvement ☐		Instructions Incomplete/Unclear ☐	☐	Fit/Function ☐	☐
Substation ☐	☐	Process Improvement ☐		Drill Holes ☐	☐	Misaligned/off center ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐		OTHER : _____			
Misidentified ☐	☐	Past Due ☐					

Picklist Print

Thursday, December 22, 2016 7:16:44 AM

Page 1

Work Order ID: 154806

154806

Parent Item: D2873-043

D2873-043

Parent Item Name: Nut Plate Assembly

Start Date: 1/3/2017

Required Date: 1/10/2017

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP A05.09.13New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B0.375X01.00 0		Purchased	No			180	f	18.4960	0.3083	6.490526			

M6061T6B0 375X01 000

6061T6 BAR .375 x 1.00

DAS
14
9-89

17/01/03

Location	Loc Qty	Loc Code
MAT	18.496	
136036	12	
m134984	1.288	
m135559	5.208	

2.16

5.208

MS20426AD4-6

Purchased

No

180

Each

675.0000

6

120

MS20426AD4-6

Rivet

17/01/10 DAS
36
9-89

Location	Loc Qty	Loc Code
GA	85	
M134502	85	
ST311	590	
M134502	590	

60

M134537

60x

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OTHER : ☐																																																															

Picklist Print

Thursday, December 22, 2016 7:16:44 AM

Page 2

Work Order ID: 154806

154806

Parent Item: D2873-043

D2873-043

Parent Item Name: Nut Plate Assembly

Start Date: 1/3/2017

Required Date: 1/10/2017

Start Qty: 20.00

Required Qty: 20.00

MS21075L5

Purchased

No

100

Each

257.0000

3

60

MS21075L5

Nut Plate

17/01/10 DAS
36
9-89

Location

Loc Qty

Loc Code

GA

13

m135470

13

LG001

24

m135470

24

ST298

220

m133498

20

m135603 -

100

m136016

50

m136442

23

m136450

27

~~13~~
2
45

Thursday, December 22, 2016 7:16:44 AM

Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date: _____		Step #: _____		QTY Effective : _____				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

DART AEROSPACE LTD		Work Order: 154806
Description: Radius Block		Part Number: D2873-3
Inspection Dwg: D2873 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

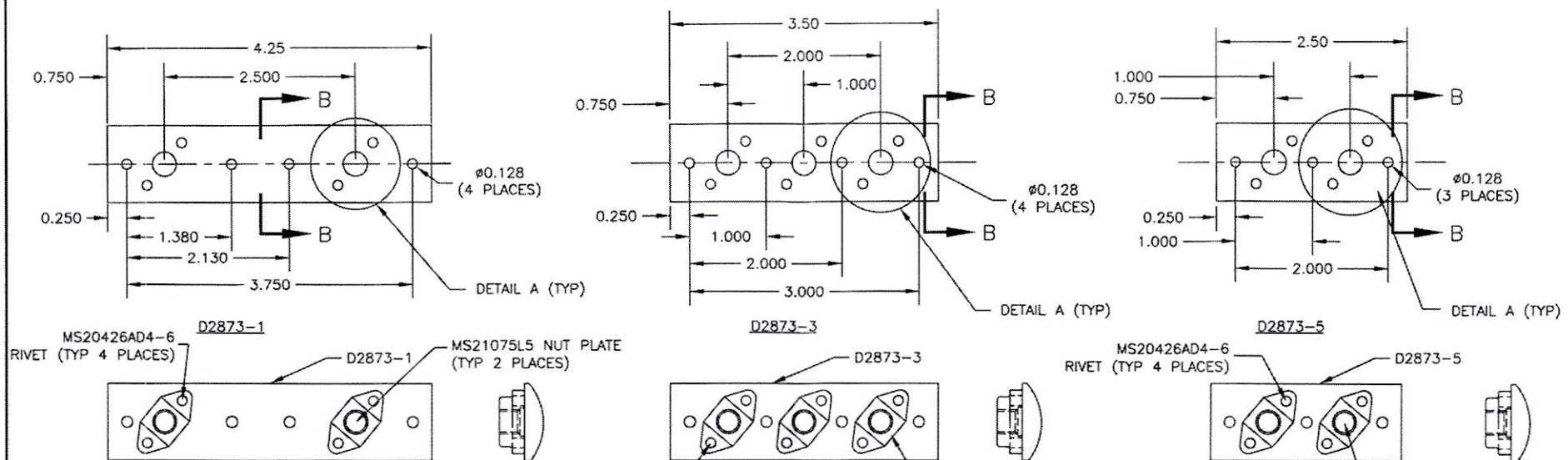
☒ **First Article**

 ☐ **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.50	+/-0.030	3.500	✓		vern H/L 06	
2.000	+/-0.010	2.000	✓		"	
0.750	+/-0.010	.750	✓		"	
1.000	+/-0.010	1.000	✓		"	
0.250	+/-0.010	.250	✓		"	
1.000	+/-0.010	1.000	✓		"	
2.000	+/-0.010	2.000	✓		"	
3.000	+/-0.010	3.000	✓		"	
Ø0.128	+0.005/-0.001	Ø.129	✓		"	
0.359	+/-0.010	.360	✓		"	
Ø0.316	+0.006/-0.001	Ø.316	✓		"	
1.000	+/-0.010	1.008	✓		"	
0.250	+/-0.010	.250	✓		"	
0.061	+/-0.010	.062	✓		"	
Ø0.230 x 0.125	+0.005/-0.001 x 0.010	.230 x .125	✓		"	

Measured by: DAS 14 9-89	Audited by: DAS 45 9-89	Prototype Approval:	N/A
Date: 17/01/03	Date: 17-01-04	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.08.30	New Issue P/O D2873-043	KJ/JLM	



D2873-041

D2873-1/-3/-5 RADIUS BLOCK

- 1) MATERIAL: 5052-H32/H34 BAR (QQ-A-225/7) (REF. DART SPEC M5052H32B1.000X00.250) OR 6061-T6 BAR (QQ-A-225/8 OR QQ-A-200/8) (REF. DART SPEC M6061T6B1.000X00.250)
- 2) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE INCHES
- 5) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 6) $\varnothing 0.128$ PILOT + C'BORE CURVED SIDE $\varnothing 0.230 \times 0.125$ DEEP + C'SINK CURVED SIDE $\varnothing 0.225 \times 100^\circ$

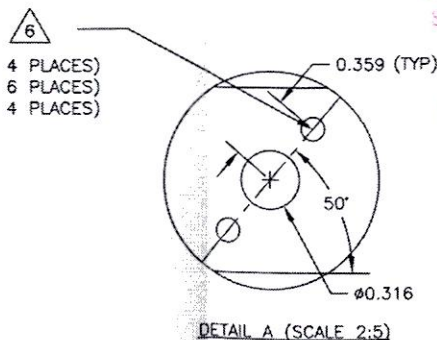
D2873-041/-043/-045 NUT PLATE ASSEMBLY

- 1) INSTALL MS21075L5 NUT PLATE IN ORIENTATION SHOWN USING MS20426AD4-6 RIVETS

D2873-041/-043/-045 NUT PLATE ASSEMBLY PARTS LIST

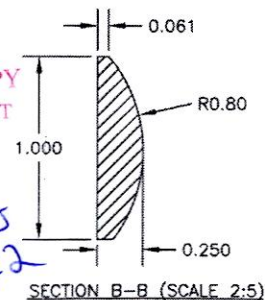
-041	-043	-045	PART NUMBER	DESCRIPTION
X			D2873-041	NUT PLATE ASSEMBLY
	X		D2873-043	NUT PLATE ASSEMBLY
		X	D2873-045	NUT PLATE ASSEMBLY
1			D2873-1	RADIUS BLOCK
	1		D2873-3	RADIUS BLOCK
		1	D2873-5	RADIUS BLOCK
4	6	4	MS20426AD4-6	RIVET
2	3	2	MS21075L5	NUT PLATE

(-041 4 PLACES)
(-043 6 PLACES)
(-045 4 PLACES)



DETAIL A (SCALE 2:5)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 154 806
161222



SECTION B-B (SCALE 2:5)

A	05.07.26	NEW ISSUE
DESIGN	PH	DRAWN BY PH
CHECKED DS	APPROVED DS	DART DART AEROSPACE LTD HAMPSHIRE, ONTARIO, CANADA
DATE	05.07.26	DRAWING NO. D2873
		TITLE RADIUS BLOCK
		REV. A SHEET 1 OF 1 SCALE 4:5

RELEASED
05-07-26